

Amendments to the Claims:

Please cancel claims 1-12, 14, 16-27, 29-33, 46-49 and 51 without prejudice or disclaimer.

A complete claim listing begins on the next page.

1-36. (cancelled)

37. (previously presented) A method for providing wireless communication, the method comprising:

providing a plurality of frequency channels in various portions of a service area, wherein a first frequency channel of the plurality of frequency channels is provided in each of two or more adjacent portions of the service area;

activating the first frequency channel in parallel with respect to the two or more adjacent portions of the service area by selecting network nodes for parallel communication links as a function of spatial characteristic groupings;

determining a spatial signature for network nodes operable in the service area, wherein the network nodes selected for parallel communication links have a compatible spatial signature;

determining compatibility of the spatial signatures by correspondence to a schedule of active radios vector; and

weighting a plurality of schedule of active radios vectors such that a heaviest weighted schedule of active radios vectors provides for a highest number of parallel communication links, wherein the plurality of schedule of active radios vectors comprises the schedule of active radios vector.

38. (original) The method of claim 37, further comprising:

selecting a schedule of active radios vector for grouping network nodes having a compatible spatial signature into is based upon a schedule of active radios vector having a highest weight.

39. (previously presented) The method of claim 37, wherein the step of activating the first frequency channel comprises:

assigning transmission time period opportunities of the first frequency channel to groups network nodes as a function of the spatial signatures.

40. (previously presented) The method of claim 37, wherein the step of activating the first frequency channel further comprises:

scheduling individual time slots of the first frequency channel transmission time period opportunities to particular network nodes as a function of communication demand associated with the network nodes.

41. (previously presented) The method of claim 37, further comprising:
dynamically changing a frequency channel utilized by a particular network node based upon a determined channel quality metric.

42. (previously presented) The method of claim 37, further comprising:
providing simultaneous transmission of a same information content using two frequency channels; and
selecting a valid information content for use from the same information content transmitted using the two frequency channels.

43. (previously presented) The method of claim 37, further comprising:
providing simultaneous transmission of portions of information content using two frequency channels; and
deriving the information content by combining the portions of information content transmitted using the two frequency channels.

44. (previously presented) The method of claim 37, wherein a second frequency channel of the plurality of frequency channels is provided in each of the two or more adjacent portions of the service area.

45-51. (cancelled)

52. (previously presented) A wireless communication system comprising:
a plurality of radios disposed to provide wireless communication links with respect to different portions of a service area, wherein at least a first set of radios of the plurality of radios disposed to provide wireless communication links with respect to the different portions of the service area utilize a first frequency channel;

a vector array setting forth a plurality of combinations of radios of the first set of radios that are activated in parallel to provide simultaneous communication links with respect to subscriber stations operable in the service area; and

a plurality of spatial signature vectors setting forth information for each one of the subscriber stations with respect to the first set of radios, wherein each of the subscriber stations has a spatial signature vector of the plurality of spatial signature vectors associated therewith;

wherein the spatial signature vectors provide information with respect to a combination of radios of the first set of radios that are acceptable to be activated in parallel when a radio of the first set of radios is in information communication with a corresponding one of the subscriber stations.

53. (original) The system of claim 52, wherein said first set of radios comprise a radio of each sector of a multi-sectored base station.

54. (original) The system of claim 52, wherein said first set of radios comprise a radio of adjacent base stations.

55. (cancelled)

56. (cancelled)

57. (previously presented) A wireless communication system comprising:
a plurality of radios disposed to provide wireless communication links with respect to different portions of a service area, wherein at least a first set of radios of the plurality of radios disposed to provide wireless communication links with respect to the different portions of the service area utilize a first frequency channel;
a vector array setting forth a plurality of combinations of radios of the first set of radios that are activated in parallel to provide simultaneous communication links with respect to subscriber stations operable in the service area; and
a plurality of spatial signature vectors setting forth information for each one of the subscriber stations with respect to the first set of radios, wherein each of the subscriber stations has a spatial signature vector of the plurality of spatial signature vectors associated therewith;
wherein vectors of the vector array are assigned a weight corresponding to a number of radios that are activated in parallel associated therewith.

58. (original) The system of claim 57, wherein each said subscriber station is identified with a vector of said vector array having a combination of radios of said first set of radios compatible with the subscriber station's spatial signature vector based upon said weighting.

59. (previously presented) A wireless communication system comprising:
a plurality of radios disposed to provide wireless communication links with respect to different portions of a service area, wherein at least a first set of radios of the plurality of radios disposed to provide wireless communication links with respect to the different portions of the service area utilize a first frequency channel;
a vector array setting forth a plurality of combinations of radios of the first set of radios that are activated in parallel to provide simultaneous communication links with respect to subscriber stations operable in the service area; and
a plurality of spatial signature vectors setting forth information for each one of the subscriber stations with respect to the first set of radios, wherein each of the subscriber stations has a spatial signature vector of the plurality of spatial signature vectors associated therewith;

a scheduler operable to select, as a function of the spatial signature vectors, a vector from the vector array identifying a combination of radios for use in providing communication links to ones of the subscriber stations, wherein the scheduler updates the vector array to indicate the vector is active.

60. (cancelled)

61. (original) The system of claim 59, wherein said scheduler is further operable to assign particular time slots available using said combination of radios to particular subscriber stations.

62. (previously presented) A wireless communication system comprising:
a plurality of radios disposed to provide wireless communication links with respect to different portions of a service area, wherein at least a first set of radios of the plurality of radios disposed to provide wireless communication links with respect to the different portions of the service area utilize a first frequency channel, wherein at least a second group of radios of the plurality of radios disposed to provide wireless communication links with respect to the different portions of the service area utilize a second frequency channel, such that the first and second frequency channels are provided in overlapping portions of the service area;

a vector array setting forth a plurality of combinations of radios of the first set of radios that are activated in parallel to provide simultaneous communication links with respect to subscriber stations operable in the service area; and

a channel selection controller dynamically selecting a frequency channel of the first and second frequency channels having a highest channel quality metric associated therewith for use in communicating with a subscriber station.

63. (cancelled)

64. (previously presented) A wireless communication system comprising:
a plurality of radios disposed to provide wireless communication links with respect to different portions of a service area, wherein at least a first set of radios of the plurality of radios disposed to provide wireless communication links with respect to the different portions of the service area utilize a first frequency channel, wherein at least a second group of radios of the plurality of radios disposed to provide wireless communication links with respect to the different portions of the service area utilize a second frequency channel, such that the first and second frequency channels are provided in overlapping portions of the service area;
a vector array setting forth a plurality of combinations of radios of the first set of radios that are activated in parallel to provide simultaneous communication links with respect to subscriber stations operable in the service area; and
a controller selecting a valid frame from frames simultaneously transmitted using the first and second frequency channels.

65. (previously presented) A wireless communication system comprising:
a plurality of radios disposed to provide wireless communication links with respect to different portions of a service area, wherein at least a first set of radios of the plurality of radios disposed to provide wireless communication links with respect to the different portions of the service area utilize a first frequency channel, wherein at least a second group of radios of the plurality of radios disposed to provide wireless communication links with respect to the different portions of the service area utilize a second frequency channel, such that the first and second frequency channels are provided in overlapping portions of the service area;
a vector array setting forth a plurality of combinations of radios of the first set of radios that are activated in parallel to provide simultaneous communication links with respect to subscriber stations operable in the service area; and
a controller deinterleaving a frame from data simultaneously transmitted using the first and second frequency channels.

66. (previously presented) A wireless communication system comprising:
a plurality of radios disposed to provide wireless communication links with respect to different portions of a service area, wherein at least a first set of radios of the plurality of radios disposed to provide wireless communication links with respect to the different portions of the service area utilize a first frequency channel; and
a vector array setting forth a plurality of combinations of radios of the first set of radios that are activated in parallel to provide simultaneous communication links with respect to subscriber stations operable in the service area;
wherein the plurality of radios comprise 802.11 compliant access points.

67. (original) The system of claim 66, wherein a medium access control layer utilized with respect to communications via said first frequency channel is not 802.11 compliant.

68. (original) The system of claim 66, wherein a medium access control layer utilized with respect to communications via said first frequency channel is adapted to facilitate synchronous data communication.

69. (original) The system of claim 66, wherein said first frequency channel is in an unlicensed frequency band.